

AISHWARYA NAIR

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EDUCATION

Masters of Science in Computer Science

Sept 2023 – May 2025 (Expected)

University of Massachusetts Amherst

• **GPA: 3.96**

• Coursework: Reinforcement Learning, Machine Learning, Applied Statistics, Distributed Operating Systems, Quantum Cryptography and Communication

Bachelor in Engineering in Information Technology

Aug 2017 – Sept 2021

V.E.S. Institute of Technology

• CGPA: 9.14/10

• Stood top 5 in the department of Information Technology 4 times.

WORK EXPERIENCE

Data Science Intern and Co-op — Boehringer Ingelheim

May 2024 - present

- Engineered a **Streamlit** application to provide a comprehensive solution for deploying image processing models as a service, enhancing accessibility and user experience.
- Developed and implemented modules for creating, triggering and monitoring **Databricks** pipelines, reducing latency by up to 60 seconds, and delivering inference results directly from **AWS S3** buckets.
- Documented the process of triggering and monitoring databricks pipelines on **Confluence** increasing development speed and efficiency for related use cases.
- Created scripts to deploy **MMCV** and **MMDet** models on Databricks as serving endpoints using **MLflow** and **Workspace Model Registry** for the pilot phase.
- Enhanced a web scraping algorithm using **BeautifulSoup**, improving data retrieval efficiency from vendor websites by 50%..
- Developed a **GPT-4**-based framework to **classify** vendors into nine categories based on services offered, including retail pharmacy, retail chain pharmacy, mail-order pharmacy, etc.
- Joining as a fall co-op at BI from September 3 onwards.

Artificial Intelligence Engineer - Heystack Inc.

Sept 2021 – Aug 2023

- Conducted research on human emotional responses to snack consumption, identifying 23 emotions and their definitions within text, leading a team of 5 in the process.
- Developed a comprehensive lexical ontology to categorize 23 emotions observed post-consumption of savory snacks, enhancing PepsiCo's flavor profile analysis.
- Led a 5-person team in data management and creation, crafting an algorithm leveraging **MPNet** and **BERT models** to achieve ~70% accuracy in text classification based on these 23 emotions.
- Enhanced VFCorp's classification framework by 20%, employing **fine-tuned transformer models** analyzing 20 parameters to extract insights from text data.
- Implemented fine-tuned models on **AWS EC2 in Unix** as a **REST API** using **Flask, Python, AJAX, SQL** and **Javascript**, handling ~2000 reviews per request with an Apache server.
- Engineered an algorithm utilizing morphological analysis to isolate clauses within sentences, bolstering transformer model accuracy by 50% while shortening clauses.
- Devised a **GPT-4** prompt-based framework automating the ontology design process, expediting the deployment of vertical-specific analytics.
- Deployed an API for training and testing **GPT-4 models** on **OpenAI Fine Tuning API**, elevating average model accuracy by 2%.

PROJECTS

Forest fire prediction using LSTM models — Student team leader

Jan 2020 - May 2021

- Engineered an LSTM model with **Python, Tensorflow, and Azure** utilizing NASA data, enhancing prediction accuracy by ~85%.
- Oversaw a team of 4 for data management and collection, as well as 2 web designers, crafting a **Django** application to deploy the model and showcase outcomes.
- Revised and drafted to the proposal featured in INCET 2021 and the **Microsoft AI for Earth** program's awarded research grant worth USD 15000.